

## ABSTRACT OF THE DISCLOSURE

A system for selecting routing information from a routing table describing alternative routes between end nodes. The routing table represents a set of minimum cost, deadlock-free routes between end nodes. The selected routing information is included in forwarding tables, and sent to networking devices in the network. The selected routing information is optimized for at least one network performance metric, such as overall network capacity or fault tolerance. Capacity optimization is obtained by selecting from alternative routes stored within the routing table such that the standard deviation of the number of routes flowing over each link in the network is minimized. Fault tolerance optimization is achieved by selecting from the alternative routes stored in the routing table such that the selected route for a given end node pair has a "failover" route with a maximum number of dissimilar links from the selected route.

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